OSWER Innovations Pilot

Greening Industrial Design

The Office of Solid Waste and Emergency Response (OSWER) initiated a series of innovative pilots to test new ideas and strategies for environmental and public health protection to make OSWER programs more efficient, effective, and user-friendly. A small amount of money is set aside to fund creative proposals. The creative projects test approaches to waste minimization, energy recovery, recycling, land revitalization, and homeland security that may be replicated across various sectors, industries, communities, and regions. We hope these pilots will pave the way for programmatic and policy recommendations by demonstrating the environmental and economic benefits of creative, innovative approaches to the difficult environmental challenges we face today.

BACKGROUND

The industrial design profession holds tremendous untapped potential for improving the environmental performance of a vast range of manufactured products and creating opportunities for significant pollution prevention, energy savings, waste minimization, and other benefits. Most of the environmental impact that a product creates during its life cycle is determined in the design stage when industrial designers, working in conjunction with manufacturers, retailers, users, and disposers, determine a product's materials, production processes, use, recycling, and disposal. This is the stage when coatings, dyes, and additives are selected. It is the stage at when packaging is selected and determinations are made that affect how much energy, water, or other consumables will be needed. Design decisions affect how a product will be disposed of and whether it ultimately can be recycled, used a second time, or remanufactured.

However, most practicing industrial designers have received little or no training in how to design products and packaging that are made with less toxic or recycled materials and are easily reused, repaired, or recycled. Moreover, the vast majority of industrial design students enrolled in the estimated 55 design schools in the U.S. do not receive training in this critical area. Only 12 design schools have "eco-design" curricula, and it is not well integrated with the rest of the schools' design curricula. Advances in resource conservation and pollution prevention will only be incremental unless a comprehensive approach, starting with design, is taken.

PILOT APPROACH

U.S. EPA Office of Solid Waste, in partnership with the Industrial Design Society of America (IDSA) will conduct a project consisting of workshops, a web site, and outreach and networking components targeted to the most influential groups of practicing professionals and educators in the industrial design profession. The Pilot will be coordinated by IDSA, the professional organization of industrial designers, and will be run by recognized experts in eco-design. The project will leverage the resources of other organizations that target green-oriented designers, including all design schools in the U.S. with green curricula, and the U.S.-based chapters of O2, the global network of ecologically aware designers. Two of the most recognized experts in the areas of eco-design and innovation will lead this effort and ensure its success.

Workshops will be conducted in three U.S. cities with the objective of creating awareness of, and a facility with, "Business Ecodesign TOOLS," which provides designers with three highly credible, easy-to-use methods for reducing environmental impacts of products. The target audiences for the workshops include the 4,000 members of the IDSA, the U.S.-based chapters of O2, and the 55 design schools in the U.S. that have industrial design programs. Members of the local business community will share case examples of actual ecodesign and innovation projects successfully completed by their firms. Workshop content will be placed onto the IDSA website and outreach to the entire design community will be conducted to gain the broadest possible exposure for its existence.

INNOVATION

Reducing the environmental footprint of a product throughout its life cycle is an essential component of sustainable development and an important focus for the next generation of environmental protection. Given that most of the environmental impacts associated with products over their entire life cycle is determined in the design stage, and that the vast majority of designers do not have any education on this topic, leveraging the potential of industrial designers to minimize environmental impacts is an innovative, cost-effective approach to reducing product impacts. The workshops will represent the first opportunity that designers across the country will have to learn first hand from recognized experts in eco-design and innovation about how to use these tools and establish networks that will allow them to continue their education. Furthermore, the Pilot will provide current and future industrial designers with readily available information and tools on green design and innovation.

BENEFITS

Developing expertise in eco-design is critical not only to our environment, but also to maintaining U.S. competitiveness in the global marketplace. Policy initiatives are in place in the European Union and throughout Asia that foster product stewardship initiatives. With greening fast becoming a new standard of quality worldwide, the U.S. needs to find innovative ways to educate our designers with an ecological perspective or our products will lose shares in global markets. Greening our designers will help advance the various voluntary initiatives EPA is undertaking to promote product stewardship as well as foster opportunities to bring greater innovation overall to the product design process.

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For additional information, visit the EPA OSWER Innovations web site at: www.epa.gov/oswer/IWG.htm.

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